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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/150,360	09/09/98	YERAZUNIS	W MERL-1197

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EXAMINER

VOISINET, J

ART UNIT	PAPER NUMBER
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2713

DATE MAILED:

09/15/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/150,360

Applicant(s)
William S. Yerazunis

Examiner
John Voisinnet

Group Art Unit
2713



- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 1-35 is/are pending in the application.
- Of the above, claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-35 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.

Application Papers

- ☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☒ Notice of References Cited, PTO-892
- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Drawings

1. The drawings submitted have been objected to by the drafts person for reasons stated on the enclosed PTO-948. Corrections are required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 6-7, 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (US 5,342,054) in view of Black (US 4,835,621).

In claims 1,2 and 16,17 Chang shows a method and system for capturing the video of an area just before and after the occurrence of the event which is triggered by an external sensor. The method and system comprise: the means and method of storing video image data within a semiconductor memory (Fig 4; col 9, lines 43-46); and the controller means and method of preserving within the semiconductor memory the video image data generally surrounding the target and corresponding to data stored preceding and subsequent to the triggering event (col 2, lines 16-31; col 11, lines 5-22). The application where Chang teaches this system and method is

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for use in analyzing a golfer's swing, and is not directed specifically for use the monitoring the events surrounding the discharge of a weapon. However, the event at which the golf ball is struck and sensed by optical and infrared (IR) sensors (col 7, line 15-26; col 6, lines 3-12) is analogous to the event of the firing of a weapon and detecting the discharge with sensors. Black, however, teaches the use of mounting a video camera and recording device on a weapon (Fig 1, col 4, lines 10-21). Therefore it would be obvious to one of ordinary skill in the art to use the teachings of Black in directing the application of the system and method of Chang to recording the discharge of a weapon. This would allow the user of the weapon to record the critical events surrounding the firing of a weapon.

Black shows the weapon comprising a gun (Fig 1) for claims 2 and 17.

Regarding claims 6 and 18, Chang shows a method and means for storing video image data in a semiconductor memory and in response to a sensor signal, save within the memory video data corresponding to at least one frame prior to the sensor signal output (col 7, lines 27-46; col 10, line 51- col 11, line 22).

Regarding claim 7, Chang shows the method of using a circular buffer which records the data into memory substantially periodically (col 9, lines 42-59).

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4. Claims 3-5 and 19-22, 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Black as applied to claims 1 and 16 above, and further in view of McMahan (US 5,845,165).

Regarding claims 3-4 and 19-20, neither Chang nor Black mention the use of microphones or accelerometers to be used generate a sensor signal to trigger the storing of the video data. Such sensors would provide redundant methods of ensuring that the proper portion of video is saved in the event that the mechanical switch fails. Official notice is taken that the use of such sensors to trigger recorders are well known and used in the art. It would be obvious for one of ordinary skill in the art to modify the optical sensor shown by Chang (16, 88, Fig 2; col 7, lines 15-26) by the use of accelerometers or microphones to generate the sensing signal. This would provide a redundant method for actuation in case the mechanical switch on the weapon's trigger fails.

Regarding claims 5 and 21, the method and system of Chang as modified by Black suggests a weapon which can record an area in view of the line of sight during the time surrounding a triggered event. Neither Black nor Chang suggest the mode of triggering be the a switch on the actual trigger of the weapon. Black does suggest a switch for illumination control actuated by the gun's trigger (Fig 10); however, the control of the video recorder in Black's invention is actuated through the linear action of the grip (Fig 9). This mode of video control is not as "natural" as using the trigger of the gun itself. The user could easily forget to switch the recorder on when under the pressure of an actual firefight, and fire the weapon without switching

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on the recorder. McMahan teaches the method and means for using the trigger switch to activate the video recorder (14, Fig 1; col 4, lines 28-33). Therefore it would be obvious to one of ordinary skill in the art to apply the teachings of McMahan in the means/method of Chang modified by Black by utilizing the trigger of the gun signify the event for which video is to be saved. This would create a more appropriate way to ensure that the triggering of the event is coincident with the firing of the weapon, thereby eliminating the possibility of the user failing to turn on the recorder.

In claim 22, Chang shows the use of a circular buffer means which records the video data substantially periodically (col 9, lines 42-59).

Regarding claim 24, Chang shows a system where at least one semiconductor memory comprises at least one dynamic random access memory (col 4, lines 24-28).

Regarding claims 25-30, Chang mentions the use of DRAM in the embodiment of his invention (Col 4, lines 24-28) which resides in a conventional personal computer (PC). PC also utilize various forms of non-volatile, flash, bubble, and electrically erasable memory to store data. Official notice is taken that the use of various forms of non-volatile memory is merely a matter of obvious design choice which yields no findings unexpected in the prior art. Therefore one of ordinary skill in the art would find it obvious to utilize non-volatile memory to store the video data surrounding the event in the apparatus of Chang to preserve the data in the event of a power outage.

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5. Claims 8-11,13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Black as applied to claim 6 above, and further in view of Fielder (US 5,845,240).

Regarding claim 8, neither Chang nor Black specifically mention storing video data associated with multiple events. Chang method only stores one event in semiconductor memory which is simultaneously stored on a VCR (col 12, lines 48-54). Fiedler shows a digital recording method which can be used for sound and/or video which records multiple events in circular buffers (col 4, lines 21-49). Therefore, it would be obvious for one of ordinary skill in the art to implement a buffer scheme as shown by Fielder (Fig 2) in the main memory of the method shown by Chang (46, Fig 2). This would improve the flexibility of the system by allowing more than one event to be stored and analyzed.

Regarding claim 9, Fielder shows in Fig 2 where each successive event is stored is stored in a portion of the circular buffer in a portion smaller that the portion associated with the prior events.

Regarding claim 10, Fielder shows the method of recording digital audio into semiconductor memory by sampling the audio with a digital to analog converter (col 4, lines 34-39). The data is stored in acquisition buffers responsive to a thresholded audio event (col 5, line 63-col 6, line 9).

For claim 11, Fielder shows the use of an A/D converter which is used to quantize the audio data; it is inherent in all A/D converters that they quantize signals in a non-linear fashion.

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Regarding claim 13, Fielder shows the use of storing data within a first semiconductor memory from time to time and in response to an event sensor output writing the data into second semiconductor memories (col 5, line 63- col 6, line 8). Official notice is taken that the memory could be a non-volatile memory; therefore it would be obvious to one of ordinary skill in the art to transfer the data to non-volatile memory in order to preserve it in the event of a lack of power.

6. Claim 12, 15, 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Black as applied to claim 1 above, and further in view of Scerbo (US 5,546,124).

In claims 12 and 31, neither Chang nor Black show the method and means using of a generating a signal with a holster state sensor having a first state when the weapon is holstered and a second state when the weapon is withdrawn, and storing video data in memory only when the holster sensor is in the withdrawn state. Scerbo, however shows a surveillance method and system which uses such an arrangement (Fig 2, col 11, lines 8-23). Therefore it would be obvious to one of ordinary skill in the art to modify the triggering method of the method of Chang as modified by Black in order to initiate the recording when the weapon is moved to a drawn state. This would allow for better power utilization of the device to have it in an on state only when the weapon has a potential of being used.

For claims 15 and 35, Scerbo teaches the method and means of storing time and date information along with the recorded video data (col 11, lines 12-23).

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Regarding claims 32, Scerbo reveals that the enabling sensor is a switch (col 9, 36-43). Scerbo does not show that the switch is a magnetic or a magnetic read switch in claims 33 and 34, respectively. Official notice is taken by the examiner that such magnetic switches are well known and used in the art to use as sensors to trigger events. It would be obvious for one of ordinary skill in the art to replace the mechanical switch shown by Scerbo to a magnetic variant. This would help increase the reliability of the sensor by eliminating troublesome mechanical switching contacts.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Black and Fielder as applied to claim 12 above, and further in view of Scerbo (US 5,546,124).

For claim 14, Chang as modified by Black and Fielder teaches an video recording method for storing image data on a semiconductor in view of the line of sight of a weapon resultant to a firing event. Fielder teaches of using a first and second semiconductor memory to transfer the recorded data (col 5, line 63-col 6, line 8). However, Fielder does not teach the use of a user presenting a valid password to access read data from the second semiconductor memory. Scerbo however, teach the use of using codes, or passwords, in order to gain access to video data which has been stored on a recording medium (col 6, lines 35-44). Therefore it would be obvious to one of ordinary skill in the art to use the teachings of Scerbo in the method of Chang modified by Black and Fielder in order to secure the data retained in semiconductor memory. A password and encryption algorithm can be implemented in the main controller shown by Chang (46, Fig 2)

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towards this end. This would protect the contents of the semiconductor memory from unauthorized use.

7. Claims 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Black and McMahan as applied to claim 22 above, and further in view of Fielder (US 5,845,240).

Regarding claim 23, neither Chang, Black nor McMahan specifically mention storing video data associated with multiple events. Chang method only stores one event in semiconductor memory which is simultaneously stored on a VCR (col 12, lines 48-54). Fiedler shows a digital recording method which can be used for sound and/or video which records multiple events in separate portions of semiconductor memory (col 4, lines 21-49). Therefore, it would be obvious for one of ordinary skill in the art to implement a buffer scheme as shown by Fielder (Fig 2) in the main memory of the method/means shown by Chang (46, Fig 2). This would improve the flexibility of the system by allowing more than one event to be stored and analyzed.

8. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Black as applied to claim 16 above, and further in view of Scerbo and Hashimoto (US 5,815,205).

For claim 29, the apparatus of Chang modified by Black does not specifically disclose the use of a bidirectional communications interface to a controller in order to read data from the semiconductor memory. Hashimoto teaches the use of such an interface for digital camera

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communications with a personal computer (Fig 2; col 2, lines 22-34). It would be obvious for one of ordinary skill in the art to implement this interface as taught be Hashimoto in the apparatus of Chang as modified by Black. Such a device would allow the data to be read from main memory (Fig 2, 42) to an external digital device for storage into a portable medium. This would allow the user to easily transfer the data from one device to another. Furthermore, Neither Chang, Black, nor Hashimoto disclose the use of password to access the data form the semiconductor medium. Scerbo shows the use of a protecting the recording medium using codes, or passwords (col 6, lines 35-44). Therefore, it would be obvious to one of ordinary skill in the art to modify the apparatus of Chang as modified by Black and Hashimoto by the teachings of Scerbo and utilize a password protection scheme to protect the data from being downloaded through the bidirectional interface. This would improve the security of the apparatus by allowing only authorized individuals to access the data.

In claim 30, Hashimoto shows an bidirectional interface which utilizes a serial protocol (col 2, lines 23-34).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Scerbo (US 5,400,185) shows an evidence recorder which can be worn on a person to record audio and/or video information.

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Esfandiari (US 5,499,049) show the use of a motion detector which is used to activate a video recorder to monitor seismic events.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Voisinet whose telephone number is (703) 305-0628. The examiner can normally be reached Monday-Friday from 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tommy Chin, can be reached on (703) 305-4715. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-5359.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

JAV

September 10, 1999


TOMMY P. CHIN
SUPERVISORY PATENT EXAMINER
GROUP 2700